

**REMARKS**

Claims 1-46 were presented for examination and were pending in this application. Claims 17-25, 27, 33, 35, and 37-46 were previously withdrawn from consideration in the Response to Restriction Requirement filed September 22, 2003. In an Official Action dated October 31, 2003, claims 1-16, 26, 28-32, 34, and 36 were rejected. Applicant thanks Examiner for examination of the claims pending in this application and addresses Examiner's comments below.

Applicant herein amends claims 1, 5, 12, 15, 28, 30, 31, and 34. Claims 2, 9, 10, and 11 are canceled. These amendments do not introduce new matter, and their entry is respectfully requested. The claims have been amended to expedite the prosecution of the application in a manner consistent with the Patent Office Business Goals, 65 Fed. Reg. 54603 (Sept. 8, 2000). In making these amendments, Applicant has not and does not narrow the scope of the protection to which Applicant considers the claimed invention to be entitled and does not concede that the subject matter of such claims was in fact disclosed or taught by the cited prior art. Rather, Applicant reserves the right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that Examiner reconsider all outstanding objections and rejections, and withdraw them.

### **Substance Of Telephone Interview**

Applicant thanks the Examiner for his time during the telephone interview on April 22, 2004. During the interview, Applicant's representative noted that the application from which the present application claims priority, initially submitted as "serial no. XXX," is a utility application (09/905,704) converted from provisional on the same date that the present application was filed, and thus no serial number was available at the time of filing. In addition, Applicant's representative explained that the Examiner likely could locate no record for provisional application 60/271,778 due to the conversion of that application subsequent to filing the present application. The Examiner advised Applicant's representative to amend the priority claim to reflect this clarification.

Applicant's representative also mentioned to the Examiner that in light of the corrected priority information, references cited by the Examiner as anticipatory are no longer anticipatory. The Examiner advised Applicant's representative to indicate this fact in response to the rejections based on anticipation.

As recommended by the Examiner, Applicant has amended paragraph [001] of the specification to reflect this information. Applicants have supplied the missing serial number and updated the status of the applications where appropriate. In addition, the priority claim sentence has been separated into two sentences to more clearly reflect the two bases for priority. Applicants respectfully submit that the disclosure has been appropriately corrected. The rest of the priority claim remains as filed, providing the present application an effective date of March 24, 1999. As a result, the references cited by the Examiner as anticipatory, specifically Herron et al. WO 00/56898 (2000) and Yang et al. (September 1999), now post-date the effective date of the present application.

As a separate matter, Applicants have petitioned for correction of the priority claim of 09/905,704, which also claims priority from WO 00/56898. However, as that petition has not yet been granted, Applicant has not revised the priority claim herein to reflect the petition.

### Informalities

Examiner noted that claim 28 improperly depended on claims 1-27, as claims 17-25 and 27 were non-elected claims. Claim 28 has been amended to depend on any one of claims 1, 3-8, or 12-16. Applicant therefore submits that claim 28 now recites a proper dependency and is in condition for allowance.

Examiner noted that claims 9-16 were in improper dependent form for failing to further limit the subject matter of claims from which they variously depend.

Claims 9-11 are canceled, as the subject matter contained therein was encompassed by the claims on which claims 9-11 depend. Claim 12 has been amended to depend on claim 8 and to recite a composition in which growth of human microvascular structures is modulated by a pharmaceutically acceptable compound that promotes angiogenesis. Therefore, claim 12, as amended, now limits claim 8 to growth adjusted by the presence of a compound that promotes vessel growth from pre-existing capillaries. Claims 13 and 14 each recite a single compound that promotes angiogenesis, further limiting the group of such compounds of claim 12. As a result, Applicant respectfully submits that claims 12, 13, and 14 as amended further limit claim 8.

Claim 15 as been amended to depend on claim 8 and to recite a composition in which growth of human microvascular structures is modulated by a pharmaceutically acceptable compound that is an anti-angiogenic compound. Therefore, claim 15, as amended, now limits claim 8 to growth adjusted by the presence of a compound that inhibits

angiogenesis. Claim 16 recites a single compound that inhibits angiogenesis, further limiting the group of anti-angiogenic compounds of claim 15. Therefore, Applicant respectfully submits that claims 15 and 16 as amended further limit claim 8.

**Response to Rejection Under 35 U.S.C. § 101**

The Examiner rejected claims 34 and 35 as non-statutory subject matter under 35 U.S.C. § 101. As claim 35 was previously withdrawn from consideration, Applicant addresses only claim 34 at this time. In accordance with the Examiner's suggestion, Applicant has amended claim 34 to recite a non-human transgenic animal, specifically, "a composition comprising immortal human microvascular cells...," bringing claim 34 in accord with the other pending claims. Therefore, Applicant respectfully submits that claim 34, as amended, constitutes statutory subject matter.

**Response to Rejection Under 35 U.S.C. § 112, Paragraph 1**

The Examiner has rejected claims 1-16, 26, and 28-32 as allegedly lacking enablement. This rejection is respectfully traversed.

Claims 2 and 9-11 are canceled. In accordance with the Examiner's suggestion, Applicant has amended claims 1, 3-8, 12-16, 28-32, 34, and 36 to recite human endothelial cells with an expression vector expressing human telomerase. As a result, Applicant submits that these claims are enabled by the specification and are in condition for allowance.

The Examiner also has further rejected claim 11, objecting to the use of the term "pharmaceutically acceptable compound." Claim 11 has been cancelled. However, because claims 12 and 15, as amended, retain the term pharmaceutically acceptable compound, Applicant addresses the rejection here.

Applicant respectfully traverses this rejection. According to MPEP 2111.01, an Applicant may be his or her own lexicographer as long as the meaning assigned to the term is not repugnant to the term's well known usage. The specification, at paragraph [0101], defines the term "pharmaceutically acceptable" as a material which is not biologically or otherwise undesirable, and which may be administered without interacting in a deleterious manner with any of the compounds in which it is contained. Claims 12 and 15 further recite pharmaceutically acceptable compounds that are angiogenic or anti-angiogenic, respectively. As a result, Applicant submits that claims 12 and 15 provide adequate guidance as to how to make the invention without undue effort sufficient to be patentable to Applicant.

**Response to Rejection Under 35 U.S.C. § 112, Paragraph 2**

The Examiner has rejected claims 5 and 6 as allegedly not specifically pointing out and distinctly claiming the subject matter that the Applicant regards as the invention.

With respect to claim 5, the Examiner noted that the inclusion of the phrase "and both" seemed redundant. Applicant respectfully traverses this rejection. MPEP 2173.05(h) & (o) indicates that Markush groups may properly use the "and" form, even if such form creates "double inclusion." However, MPEP 2170.05(h) permits the use of the "or" form as well. As a result, Applicant has amended claim 5 to recite "or both" per Examiner's recommendation.

In addition, the Examiner found the "signaling pathways" of claim 5 to be vague as encompassing various methods of signal transduction. Applicant has amended claim 5 to recite endothelial cell specific signaling transduction pathways. There are several signaling pathways specific to endothelial cells known in the art, such as the alpha-v beta-3 integrin and VEGF 1, 2, and 3 receptors. As a result, Applicant submits that claim 5 as amended now

defines the invention with sufficient particularity and distinctiveness to be patentable to Applicant.

With respect to claim 6, the Examiner found vague the use of the phrase “transformed genetic marker.” Applicant respectfully traverses this rejection. According to MPEP 2111.01, an Applicant may be his or her own lexicographer as long as the meaning assigned to the term is not repugnant to the term’s well known usage. The specification, at paragraph [077], defines use of the terms “untransformed” and “not transformed” to refer to cells not transfected with an oncogene or in which an oncogene has not been specifically activated. Thus, the definition indicates that “transformed” refers to cells that are transfected with an oncogene or in which an oncogene has been specifically activated. This usage of the term “transformed” is retained throughout the specification (e.g., paragraphs [011], [023], [024], [032], [076], [088], [0127], [0186], [0190], [0309], [0318]). In addition, this is a known usage of the term, indicated by the citations in paragraphs [077] and [0147] to other sources so using the term. As a result, Applicant submits that claim 6 as originally submitted defines the invention with sufficient particularity and distinctiveness to be patentable to Applicant.

The above amendment of claim 5 is made so as to more clearly define the invention, and not to narrow the scope of protection with respect to the prior art, or with respect to potentially infringing devices/compositions/articles.

Claims 6 and 7 have been amended to recite “genetic marker” to bring the claims in alignment with the applications from which they claim priority and to more distinctly claim the subject matter that the Applicant regards as the invention.

**Response to Rejection Under 35 U.S.C. § 102(b)**

The Examiner has rejected claims 1-16, 26, 28-32, 34, and 36 under 35 U.S.C. § 102(b) as anticipated by Herron et al. (WO 00/56898) and claims 1-5, 28, 29, and 31 as anticipated by Yang et al. (J. of Biol. Chem. 1999).

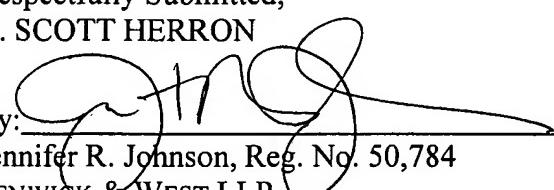
Claims 2, 9, 10, and 11 are canceled. With respect to claims 1, 3-8, 12-16, 26, 28-32, 34, and 36, applicants respectfully traverse this rejection. Applicants note that, for the reasons detailed above with respect to priority, the application has an effective date of March 24, 1999. Therefore, the cited references cannot be used to anticipate the claimed invention under 102(b).

**Conclusion**

In sum, Applicant respectfully submits that claims 1, 3-8, 12-16, 26, 28, 34, 36 as presented herein, are patentably distinguishable over the cited references (including references cited, but not applied). Therefore, Applicant requests reconsideration of the basis for the rejections to these claims and request allowance of them.

In addition, Applicant respectfully invites Examiner to contact Applicant's representative at the number provided below if Examiner believes it will help expedite furtherance of this application.

Respectfully Submitted,  
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